



Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: WWW-FRB-CDA006-122717 Grab Water
Wolverine World Wide

Tetra Tech, Inc.
ELLE Sample #: WW 9388835
ELLE Group #: 1891712
Matrix: Water

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00

Collection Date/Time: 12/27/2017 14:38

SDG#: WWW01-17FB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|-----------------------|---|----------------------------|--------|------------------------|-----------------|
| Misc. Organics | | EPA 537 Version 1.1 | ng/l | ng/l | |
| 14070 | NEtFOSAA | 2991-50-6 | N.D. | 2 | 1 |
| | NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | NMeFOSAA | 2355-31-9 | N.D. | 2 | 1 |
| | NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | Perfluorobutanesulfonate | 375-73-5 | N.D. | 2 | 1 |
| 14070 | Perfluorodecanoic acid | 335-76-2 | N.D. | 2 | 1 |
| 14070 | Perfluorododecanoic acid | 307-55-1 | N.D. | 2 | 1 |
| 14070 | Perfluoroheptanoic acid | 375-85-9 | N.D. | 2 | 1 |
| 14070 | Perfluorohexanesulfonate | 355-46-4 | N.D. | 2 | 1 |
| 14070 | Perfluorohexanoic acid | 307-24-4 | N.D. | 2 | 1 |
| 14070 | Perfluorononanoic acid | 375-95-1 | N.D. | 2 | 1 |
| 14070 | Perfluoro-octanesulfonate | 1763-23-1 | N.D. | 2 | 1 |
| 14070 | Perfluorooctanoic acid | 335-67-1 | N.D. | 2 | 1 |
| 14070 | Perfluorotetradecanoic acid | 376-06-7 | N.D. | 3 | 1 |
| 14070 | Perfluorotridecanoic acid | 72629-94-8 | N.D. | 2 | 1 |
| 14070 | Perfluoroundecanoic acid | 2058-94-8 | N.D. | 2 | 1 |

The recovery for 13C2-PFHxA is outside of QC acceptance limits as noted on the QC Summary. Since the result is high and no target analytes were detected, the data is reported.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|---------------------|--------|----------|------------------------|---------------------|-----------------|
| 14070 | Full List PFAS - DW | EPA 537 Version 1.1 | 1 | 18005007 | 01/09/2018 20:21 | Marissa C Drexinger | 1 |
| 14381 | DW PFAS Prep | EPA 537 Version 1.1 | 1 | 18005007 | 01/05/2018 07:35 | Pamela Rothharpt | 1 |



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Sample Description: WWW-DW-CDA006-122717 Grab Water
Wolverine World Wide

Tetra Tech, Inc.
ELLE Sample #: PW 9388836
ELLE Group #: 1891712
Matrix: Water

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00

Collection Date/Time: 12/27/2017 14:40

SDG#: WWW01-18

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|-----------------------|---|----------------------------|--------|------------------------|-----------------|
| Misc. Organics | | EPA 537 Version 1.1 | ng/l | ng/l | |
| 14070 | NEtFOSAA | 2991-50-6 | N.D. | 2 | 1 |
| | NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | NMeFOSAA | 2355-31-9 | N.D. | 2 | 1 |
| | NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | Perfluorobutanesulfonate | 375-73-5 | N.D. | 2 | 1 |
| 14070 | Perfluorodecanoic acid | 335-76-2 | N.D. | 2 | 1 |
| 14070 | Perfluorododecanoic acid | 307-55-1 | N.D. | 2 | 1 |
| 14070 | Perfluoroheptanoic acid | 375-85-9 | N.D. | 2 | 1 |
| 14070 | Perfluorohexanesulfonate | 355-46-4 | N.D. | 2 | 1 |
| 14070 | Perfluorohexanoic acid | 307-24-4 | N.D. | 2 | 1 |
| 14070 | Perfluorononanoic acid | 375-95-1 | N.D. | 2 | 1 |
| 14070 | Perfluoro-octanesulfonate | 1763-23-1 | 7 | 2 | 1 |
| 14070 | Perfluorooctanoic acid | 335-67-1 | N.D. | 2 | 1 |
| 14070 | Perfluorotetradecanoic acid | 376-06-7 | N.D. | 3 | 1 |
| 14070 | Perfluorotridecanoic acid | 72629-94-8 | N.D. | 2 | 1 |
| 14070 | Perfluoroundecanoic acid | 2058-94-8 | N.D. | 2 | 1 |

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|---------------------|--------|----------|------------------------|---------------------|-----------------|
| 14070 | Full List PFAS - DW | EPA 537 Version 1.1 | 1 | 18010003 | 01/12/2018 19:59 | Marissa C Drexinger | 1 |
| 14381 | DW PFAS Prep | EPA 537 Version 1.1 | 2 | 18010003 | 01/10/2018 09:00 | Pamela Rothharpt | 1 |



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Sample Description: WWW-PF-CDA006-122717 Grab Water
Wolverine World Wide

Tetra Tech, Inc.
ELLE Sample #: PW 9388837
ELLE Group #: 1891712
Matrix: Water

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00

Collection Date/Time: 12/27/2017 14:45

SDG#: WWW01-19

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|-----------------------|---|----------------------------|--------|------------------------|-----------------|
| Misc. Organics | | EPA 537 Version 1.1 | ng/l | ng/l | |
| 14070 | NEtFOSAA | 2991-50-6 | N.D. | 2 | 1 |
| | NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | NMeFOSAA | 2355-31-9 | N.D. | 2 | 1 |
| | NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid. | | | | |
| 14070 | Perfluorobutanesulfonate | 375-73-5 | 8 | 2 | 1 |
| 14070 | Perfluorodecanoic acid | 335-76-2 | N.D. | 2 | 1 |
| 14070 | Perfluorododecanoic acid | 307-55-1 | N.D. | 2 | 1 |
| 14070 | Perfluoroheptanoic acid | 375-85-9 | 8 | 2 | 1 |
| 14070 | Perfluorohexanesulfonate | 355-46-4 | 20 | 2 | 1 |
| 14070 | Perfluorohexanoic acid | 307-24-4 | 6 | 2 | 1 |
| 14070 | Perfluorononanoic acid | 375-95-1 | N.D. | 2 | 1 |
| 14070 | Perfluoro-octanesulfonate | 1763-23-1 | 270 | 20 | 10 |
| 14070 | Perfluorooctanoic acid | 335-67-1 | 65 | 2 | 1 |
| 14070 | Perfluorotetradecanoic acid | 376-06-7 | N.D. | 3 | 1 |
| 14070 | Perfluorotridecanoic acid | 72629-94-8 | N.D. | 2 | 1 |
| 14070 | Perfluoroundecanoic acid | 2058-94-8 | N.D. | 2 | 1 |

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|---------------------|--------|----------|------------------------|---------------------|-----------------|
| 14070 | Full List PFAS - DW | EPA 537 Version 1.1 | 1 | 18010003 | 01/12/2018 20:10 | Marissa C Drexinger | 1 |
| 14070 | Full List PFAS - DW | EPA 537 Version 1.1 | 1 | 18010003 | 01/12/2018 20:22 | Marissa C Drexinger | 10 |
| 14381 | DW PFAS Prep | EPA 537 Version 1.1 | 2 | 18010003 | 01/10/2018 09:00 | Pamela Rothharpt | 1 |

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
Environmental**

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10459 Group # 1891712 Sample # 9388817

COC # 540830

| Client Information | | | | | | Matrix | | Analysis Requested | | | | | | | | For Lab Use Only | |
|---|--|--|-------------------|------|-----------|--|--|--------------------|--|--|--|--|--|--|--|---|-------|
| Client: MSG/Tetra Tech | | | Acct. #: | | | <input type="checkbox"/> Tissue <input type="checkbox"/> Ground <input type="checkbox"/> Surface | <input type="checkbox"/> Potable <input checked="" type="checkbox"/> NPDES <input type="checkbox"/> Other: | Preservation Codes | | | | | | | | FSC: | SCR#: |
| Project Name/#: Wolverine World Wide | | | PWSID #: | | | | | | | | | | | | | | |
| Project Manager: BRENT RITCHIE | | | P.O. #: 217808 | | | <input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Water | <input type="checkbox"/> Soil <input type="checkbox"/> NPDES <input type="checkbox"/> Other: | | | | | | | | | Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other | |
| Sampler: BLR/C. Renner | | | Quote #: | | | | | | | | | | | | | Remarks | |
| State where samples were collected: MI | | For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | Grab | Composite | | | | | | | | | | | | |
| Sample Identification | | Collected | | | | | | | | | | | | | | | |
| | | Date | Time | | | | | | | | | | | | | | |
| WWW-FRB-CDA004-122717 | | 122717 | 1156 | X | | | | | | | | | | | | | |
| WWW-DW-CDA004-122717 | | | 1202 | X | | | | | | | | | | | | | |
| WWW-PF-CDA004-122717 | | | 1207 | X | | | | | | | | | | | | | |
| WWW-PF-CDA004-122717-D | | | 1207 | X | | | | | | | | | | | | | |
| WWW-FRB-CDA005-122717 | | | 1250 | X | | | | | | | | | | | | | |
| WWW-DW-CDA005-122717 | | | 1253 | X | | | | | | | | | | | | | |
| WWW-PF-CDA005-122717 | | | 1258 | X | | | | | | | | | | | | | |
| WWW-FRB-CDA006-122717 | | | 1438 | X | | | | | | | | | | | | | |
| WWW-DW-CDA006-122717 | | | 1440 | X | | | | | | | | | | | | | |
| WWW-PF-CDA006-122717 | | | 1445 | X | | | | | | | | | | | | | |

| Turnaround Time (TAT) Requested (please circle) | | | Relinquished by | | Date | Time | Received by | | Date | Time |
|---|--|--|--------------------|--|----------|------|--------------------|--|------|------|
| Standard | | | <i>[Signature]</i> | | 12-29-17 | 200 | <i>[Signature]</i> | | | |
| (Rush TAT is subject to laboratory approval and surcharge.) | | | | | | | | | | |
| Date results are needed: 5-day | | | | | | | | | | |
| E-mail address: britchie@mannixsmithgroup.com | | | | | | | | | | |

| Data Package Options (circle if required) | | | Relinquished by | | Date | Time | Received by | | Date | Time |
|---|-------------------------------------|--------------------|--------------------|--|------|------|--------------------|--|----------|------|
| Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only) Level IV | NJ DKQP TX TRRP-13 | <i>[Signature]</i> | | | | <i>[Signature]</i> | | 12/29/17 | 1000 |
| Type III (Reduced non-CLP) | MA MCP CT RCP | | | | | | | | | |
| NYSDEC Category A or B | | | | | | | | | | |

| EDD Required? Yes No | | Relinquished by Commercial Carrier: | |
|---|--|-------------------------------------|---------------|
| If yes, format: | | UPS | FedEx X Other |
| Site-Specific QC (MS/MSD/Dup)? Yes No | | Temperature upon receipt 1.3 °C | |
| (If yes, indicate QC sample and submit triplicate sample volume.) | | | |



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Sample Administration Receipt Documentation Log

Doc Log ID: 205017



Group Number(s): 1891712

Client: MSG/TETRA TECH

Delivery and Receipt Information

| | | | |
|---------------------------|---------------|---------------------|-------------------------|
| Delivery Method: | <u>Fed Ex</u> | Arrival Timestamp: | <u>12/29/2017 10:00</u> |
| Number of Packages: | <u>4</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>MI</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | VOA Vial Headspace \geq 6mm: | N/A |
| Samples Chilled: | Yes | Total Trip Blank Qty: | 0 |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Wendy Wakeley (1669) at 11:06 on 12/29/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT146 | 3.6 | DT | Wet | Y | Bagged | N |
| 2 | DT146 | 1.3 | DT | Wet | Y | Bagged | N |
| 3 | DT146 | 0.4 | DT | Wet | Y | Bagged | N |
| 4 | DT146 | 1.0 | DT | Wet | Y | Bagged | N |



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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mg | milligram(s) |
| C | degrees Celsius | mL | milliliter(s) |
| cfu | colony forming units | MPN | Most Probable Number |
| CP Units | cobalt-chloroplatinate units | N.D. | non-detect |
| F | degrees Fahrenheit | ng | nanogram(s) |
| g | gram(s) | NTU | nephelometric turbidity units |
| IU | International Units | pg/L | picogram/liter |
| kg | kilogram(s) | RL | Reporting Limit |
| L | liter(s) | TNTC | Too Numerous To Count |
| lb. | pound(s) | µg | microgram(s) |
| m3 | cubic meter(s) | µL | microliter(s) |
| meq | milliequivalents | umhos/cm | micromhos/cm |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.